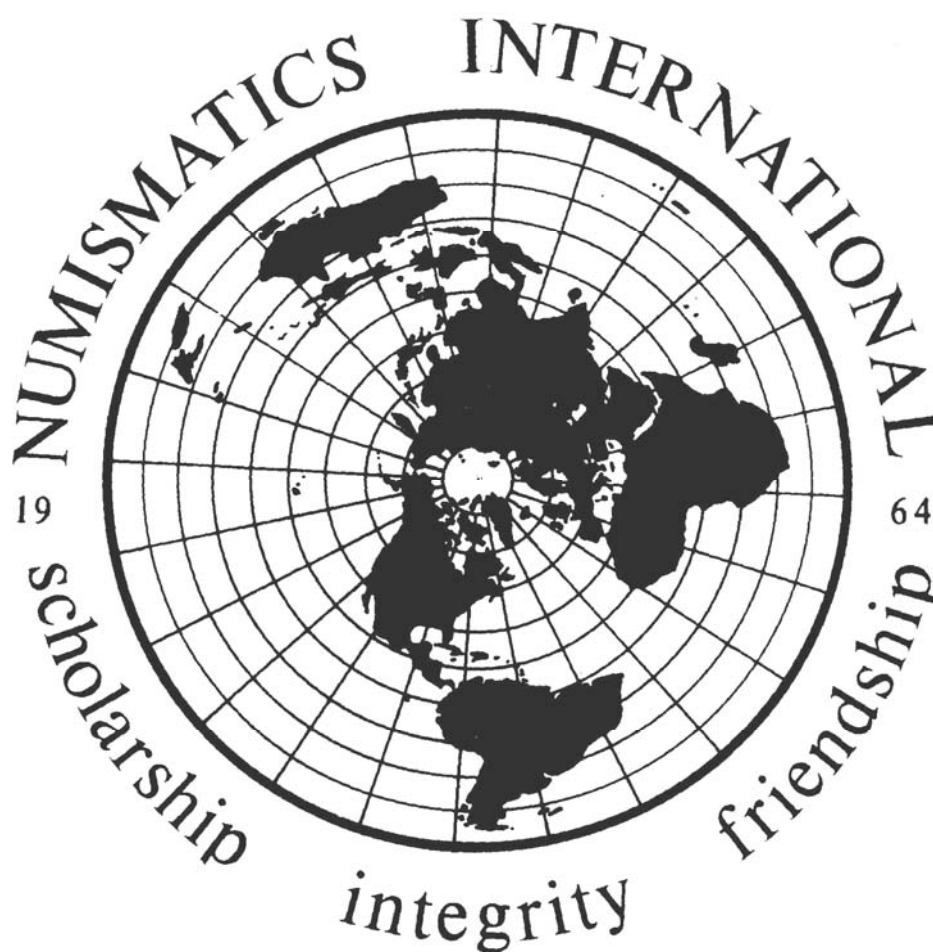


# NI Bulletin

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## From the Editor's Desk

In our lead article we have first time contributor Dr. Eduardo Dargent of Lima with his first article on Roman Republican coins. The NI Bulletin is proud to publish such a well known author within the Latin American numismatic fraternity, and we hope to see more of his work in these pages. My thanks go to Alan Luedeking for his fine translation of Dr. Dargent's article.

Another first contribution for these pages is from the work of Juan de Mariana, an extract from his *Treatise on the Alteration of Money* written in 1609. The *Journal of Markets and Morality* was the first to publish an English language translation and we are grateful to them for reprint permission of selected portions. I plan to reprint one other section from his book in a future NI Bulletin. After nearly 400 years this information is finally available to readers of English.

In addition to the Bank of Japan article we have articles from NI members Paul Harris and Horace Flatt. Horace's article is a widely expanded version of one that we published over 20 years ago; it makes for interesting reading, especially the ending, but don't skip the first eight pages! Howard Ford has a short filler, the likes of which I always appreciate, so send your short articles to me. If you are familiar with Arabic coins please read the member notice and try to help Bill Mullan.

Herman Blanton

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**Lanuvium**  
**Cradle of Seven Families of Republican Moneyers**  
**Eduardo Dargent**

Translated by Alan Luedeking NI #2282

Lanuvium, today Civita Lavinia, was an ancient city of Latium situated in the Alban Hills, some 30 kilometers southeast of Rome. The following legend, passed on by Dionysius of Halicarnassus, tells us of its origin.

"While Aeneas and his Trojan companions were busy building the city, they noticed a fire in the surrounding forest. This was being caused by a she-wolf who carried pieces of dry wood and tossed them onto the fire to feed it, while an eagle beat his wings to fan the flames. A fox vainly attempted to extinguish the flames, soaking his tail in a nearby creek, but after a long battle with the she-wolf she vanquished him and he had to escape. Aeneas deduced from this that the new colony would become famous but would have to battle its jealous neighbors, whom it would at last triumph over, demonstrating thus the destiny of the Romans."<sup>1</sup>

According to the same author, the citizens of Lanuvium, in remembrance of this prodigy, erected two statues, one of the she-wolf and the other of the eagle.

This city was the origin of seven families of moneyers who, in the Roman Republican period, left an interesting legacy of coinage in which the mythological origin of Lanuvium is celebrated, as well as the religious cults that flourished within that city. Here we shall cover not all of the coins produced by these moneyers but rather only those that concern themselves with the myths of the city.

The seven families were the *gentes* Cornuficia, Mettia, Papia, Proclia, Renia, Roscia and Thoria. Of these, only the Cornuficia and the Renia minted, in addition to silver, other metals. Cornuficia coined an aureus, and Renia two in bronze. The others have left us only silver coins. Cohen notes a gold coin of Marcus Mettius, but in his dissertation on the gold coins of Caesar he clearly expresses his doubts over the authenticity of this piece.<sup>2</sup> This doubt of Cohen's is confirmed by the fact that this coin is not mentioned again in the specialized bibliography.

Of each of these families only one moneyer is known, with the exception of the Papia, from which two are known, father and son.

Initially, the officials in charge of coinage did not place anything on the coins that would identify them, but later on they began to incorporate their own symbols. Over time, they included the abbreviated names of the coiners, and introduced, as themes on the coins, historical or mythological events related to the family of the official.

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<sup>1</sup> Free translation of texts by H.A. Seaby. *Roman Silver Coins*, Vol. 1, 1967, p. 71; H. Cohen, *General Description of the Coins of Republican Rome*, Paris-London, 1857, Facsimile edition, Madrid, 1996, p. 240; and Alteri, G. *Tipologia delle monete della repubblica di Roma*, Città del Vaticano, Biblioteca Apostolica Vaticana 1990.

<sup>2</sup> Cohen, H. on p. 216, item 5, but refers immediately to his dissertation on page xxiv where he says: "This medal can be found engraved in the work of Mionet, Volume I page 81. In spite of this, I am persuaded that it is a cast medal."

This custom has permitted us to know, through the coins, interesting episodes in the early history of Rome. In these lines we attempt to highlight the relationship between the monetary designs of a mythological character and the familial origins of the moneyers. Ancestral history was of the highest importance to Romans, and publicizing it augmented a family's prestige. Numismatics plays an important role in the identification of Roman families, since some of them are known only through their coins. There are also cases in which the moneyer and other members of his family are well known but the coins confirm or expand the knowledge we have of them.

The oldest moneyer we deal with in this article is *Caius Renius* (138 BC) of unknown family, and who, as will be explained a bit further on, is mentioned in an engraved inscription found in Lanuvium. Of the gens *Thoria* we know of one Tribune of the People of the year 111 BC named *Spurius Thorius Balbus*, and the author of the denarius struck in 105 BC, *Lucius Thorius Balbus*, who depicts on the obverse Juno Sospita with the inscription I.S.M.R. which signifies "*Junoni Sospitae Magnae Reginae*"<sup>3</sup> and on the reverse presents a charging bull, which generally leads writers to say that it is a direct reference to the coiner's name. Cohen explains, nevertheless, that the relationship is due to the Greek word *θουπος* or *θοπος* which signifies impetuous or furious, and has nothing to do with the Latin word *taurus*. This coiner is the same who, according to Cohen who cites Cavedoni, would have fought in Spain during the war of Sertorius and who was defeated in 78 BC by Hirtuleius. It was said of him that he was a devotee of the pleasures and mocked religious rites.<sup>4</sup> The family Procilia was plebeian and specialists consider that the moneyer *Lucius Procilius* could be the historian to which Pliny and Cicero refer, and whose surname is unknown.<sup>5</sup> *Lucius Papius* (79 BC) and *Lucius Papius Celsus* (45 BC) belonged to the plebeian Papia family. The latter should be the son of the former, although there are those who argue that he is the son of Gaius Papius, Tribune of the People in 68 BC, and author of the law against foreigners.<sup>6</sup> Of the Roscia family, also plebeian, we know of the existence of a few members. Thus, *Lucius Roscius* was sent as ambassador to Fidenes (*sic*) and assassinated with his companions. For this he had a statue erected to him in Rome in 438 BC. *Quintus Roscius* was a comic cited by Cicero and *Lucius Roscius Otho* was a Tribune of the People in 67 BC. The moneyer *Lucius Roscius Fabatus* was Praetor in the year 49 BC and died in the war of Modena in 43 BC.<sup>7</sup> *Quintus Cornuficius* minted his coins while being governor of Africa in 44 or 43 BC. Chronologically, the last coins to refer to Lanuvium are those of the patrician family Mettia. It was a *Mettius Fufetius* who organized the duel between the Horatii and the Curiatii while he was dictator in Alba Longa. *Marcus Mettius* (44 BC) was the only coiner of the family. He had been a second lieutenant of Caesar's, and while on a diplomatic mission to the chief of the confederation of Germanic tribes he

<sup>3</sup> Cohen, H. op. cit., p. 323. Stevenson says *Juno Sispita or Sospita Maxima Reginae* as it is expressed on denarii of *Thorius Balbus* p. 496, and refers to page 488 where we read Juno Sispita or Sospita Magna Regina. Finally, Saul Domingo in *Catálogo general de la moneda romana: I República*. Alerón Ediciones. Valencia, 1983 p. 197, says: "*Juno Sispes Mater Regina*".

<sup>4</sup> Cohen, H. op cit. p. 312.

<sup>5</sup> Domingo, Saul. *Catálogo general de la moneda romana. I. República*. Valencia, Aldón Edic. 1983. p. 184.

<sup>6</sup> Cohen, H. op. cit.. p.240

<sup>7</sup> Ibid. p. 279.

was held prisoner. Later, Caesar defeated the Germans and rescued him.<sup>8</sup> As a moneyer he forms part of the first group of *quadrumviri*, a reform of Caesar's whereby the number of moneyers went from three to four, probably with the intention of having more coinage available for his military campaigns.

There existed in Lanuvium an ancient cult of Etruscan origin to the goddess Juno Caprotina, also called Juno Sospita and Juno Lanuviana for having originated in that city. Juno Sospita, whose name signifies "The Savior," had, besides her temple in Lanuvium also one in the Holitory Forum in Rome, and her holiday was celebrated there on the first of February. Although she was the same, Juno Caprotina was celebrated in the festival of *Nonae Caprotinae*, on the 7th of July.

It is due to this devotion to the Lanuvian goddess that the Papia, Procilia, Thoria, Mettia and Roscia families depict Juno garbed in a goatskin whose horns figure prominently and relate the goddess with her military character, since this adornment was popular amongst soldiers since the time of the Greeks.<sup>9</sup> On the *denarii* of *Lucius Procilius* minted in 80 BC, in addition to the head of Juno that appears on one of them, they depict on the reverse the goddess with lance and shield, garbed with goatskin. On one of the coins of Juno she is driving a biga, and at the horses' feet can be seen a serpent, an element particular to the rites related to her temple that will be described further on. On the other coin of this moneyer, the goddess is standing in the act of throwing the javelin and the serpent is to her right. The coins of the Cornuficia family, of which there are three *denarii* and one *aureus* of the theme that interests us, were coined by Quintus Cornuficius. This moneyer was praetor in the year 66 BC and campaigned for a consulate in the same year as Cicero and lost. He achieved the religious title of Augur and presents himself as such on the coins. He was a confidant of Julius Caesar and was sent by him to Illiria in the year 48 BC, where through his bravery he received the title of Imperator (general), which appears on his coins. Afterwards, according to Cicero, he was sent to Syria and came to govern Africa as Propraetor. Upon Caesar's death he placed himself on the side of the conspirators and confronted the Triumvirate, dying in the battle he fought against Sextus who had been named governor of the new Africa. The obverses of his gold coin and one of the silver coins depict Jupiter Ammon, and on the other two *denarii* presents the head of Ceres and on the other that of Africa dressed in the skin of an elephant. The four pieces have a reverse in which *Quintus Cornuficius*, with his Augurian toga and holding a *lituus*,<sup>10</sup> is crowned by Juno Sospita who carries a raven on her shoulder or upon her shield. The raven is an interesting figure in that, although it is related to the office of the Augurs, there is also a pointed reference to Livy<sup>11</sup> according to which a raven descended on the temple of Juno Sospita in Lanuvium, which would indicate

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<sup>8</sup> Domingo, Saul. op. cit. p. 161.

<sup>9</sup> "However, the identification of that Juno Caprotina with the most famous Juno that under the name of Sospita or Sispita Mater Queen had her seat and temple until the end of the VII Century BC in Lanuvium appears indubitable." [http://it.geocities.com/tidelar/Juno\\_Caprotina.htm](http://it.geocities.com/tidelar/Juno_Caprotina.htm)

<sup>10</sup> *Litus* or "*Lituus auguralis*" is an instrument in the form of a rod that the Augur holds in his hand while he mediates with the heavens.

<sup>11</sup> Titus Livius, *History de Roma* (Ab Urbe Condita) Book XXI Chapter 62 (218 BC)

that this bird is a specific attribute of the goddess and therefore is on her shoulder or shield.<sup>12</sup>

A more elaborate reference to Juno Sospita appears on the reverse of the denarius of *Caius Renius*, of the Renia family, in which the goddess is depicted driving a biga drawn by male goats. This same moneyer was also the author of two bronze pieces, a semis and a quadrans, catalogued by Saul Domingo, which on their reverse present the prow of a galley on which stands a goat.<sup>13</sup> That the Renii should have chosen these elements for the coinage has led investigators to think their origin to be Lanuvian, which appears to be confirmed by an inscription on a gravestone found in the ruins of that city, which mentions a *C. Reni C. f. Laetus*.<sup>14</sup>

The legend of the mythical foundation of the city recounted at the beginning of these lines is also present on the coins. It is in this case on the two denarii of *Lucius Papius Celsus* minted around 45 BC where the wolf is shown with the wood and the eagle fanning the flames.

The third of the legends associated with Lanuvium is that of the dragon protector who lived in a cave near to the city, also associated with the temple of Juno. Once a year, in the Spring, a cult was celebrated which consisted of a maiden having to descend into the cave bearing a basket of food for the monster. The writer Propertius, cited by Cohen, comments on this rite as follows:

Since time immemorial this city is under the protection of an old dragon, and nobody wants to miss the moment of the annual ceremony when the religious and precipitous descent to his gloomy lair takes place.

You may fear all, young virgin, who art charged with penetrating into it, when the hungry monster demands his annual tribute of food, whistling from the depths of the cavern. The young maidens whose dangerous ministry consists in descending there, pale in horror when he opens his fiery maw. He avidly seizes the offering, and close they come to dropping the basket from their trembling hands. If they are chaste, they return to their father's arms, and the farmer exclaims: We shall have a good harvest.<sup>15</sup>

The reference to the legend of the maiden and the dragon appears on a denarius of *Lucius Roscius Fabatus* minted in the year 64 BC, and on a quinarius of *Lucius*

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<sup>12</sup> Some authors indicate that the bird is on top of her shoulder whereas others assert it is atop the shield. Stevenson, H. op. cit. p. 96 indicates that the bird is an eagle: "On a denarius of the Cuornuficia family is an eagle on the top of her shield (probably intended for a legionary one)."

<sup>13</sup> Domingo, Saul. op. cit. p.251. The piece, a Semis, which Saul Domingo illustrates, is in the Museum of Naples, with the inventory number 112863; The Kestner Museum in Hanover has two quadrans which were the ones that Crawford knew. Bahrfeld studied and photographed another example whose whereabouts are now unknown, which is identical to that of the Museum of Naples.

<sup>14</sup> CIL (Corpus Inscriptionum Latinarum), Marini, *Gli atti e monumenti de fratelli arvali* ,61-62= CIL x, 6493. It is a gravestone from the beginnings of the Empire and used to be located between the Three Taverns and the Appian Forum.

<sup>15</sup> Cohen, H. op. cit. p. 279. Also G. Alteri, in *Tipologia delle monete della repubblica di Roma*, Città del Vaticano, Biblioteca Apostolica Vaticana 1990, indicates that Eliano describes the same myth.

*Papius Celsus* of 45 BC. L. Roscius was a Quaestor of Julius Caesar in Cisalpine Gaul, and is mentioned in the Commentaries among the legacies of Legion XIII.<sup>16</sup>

One detail to keep in mind is that on the coin the maiden is making her offering not to a dragon but to a serpent, which may be explained by the abundance of serpents which there are in the region, which, as is indicated and repeated in the texts consulted, tend to nest in the fireplaces of the homes. Whether that is the reason for the change or just artistic license would be fodder for debate.<sup>17</sup>

The case of the Republican coinage of Lanuvium serves not only to review the abundant Roman mythology of a particular city, but to appreciate the research possibilities that these early pieces offer the historian.

### **Representative coins, enlarged approximately 1.5×**

Figures 1, 2, 3, 4, 5 and 7 are provided through the courtesy of *Denarios* which is a website on denarii and other ancient silver coins: <http://www.denarios.org>. All coins illustrated below are denarii except Figure 2, a quinarius, which is half a denarius.



**Figure 1**  
**Cornuficia Family**  
**Juno and Raven**



**Figure 2**  
**Mettia Family**  
**Juno in Goatskin**



**Figure 3**  
**Papia Family**  
**Juno in Goatskin**  
**Wolf & Eagle**



**Figure 4**  
**Procilia Family**  
**Juno in Goatskin**  
**Biga with Snake Beneath**



<sup>16</sup> Stevenson, Seth William, *Dictionary of Roman Coins*, London, 1889. Reprint by Seaby Ltd., 1964, p.700.

<sup>17</sup> Sometimes the head of the monster on the pieces of L. Roscius is not ophidian but of the dragon.





**Figure 5**  
**Procilia Family**  
**Juno Holding Spear, Snake Ahead**



**Figure 6**  
**Renia Family**  
**Biga Pulled by Goats**



**Figure 7**  
**Roscia Family**  
**Juno in Goatskin**  
**Maiden & Dragon**



**Figure 8**  
**Thoria Family**  
**Juno in Goatskin**

Prof. Eduardo Dargent Chamot is a native of Peru. Educated in the USA and Peru, he is professor at Universidad de Lima and at Universidad de San Martín de Porres. He is the author of several books on culture, history and numismatics, including:



- ✓ *El Billeto en el Perú*, 1979.
- ✓ *La Moneda Peruana en el Siglo XVII: Reflejo de Una Crisis*, 1988.
- ✓ *Las Casas de Moneda de Lima y Potosí. Las Casas de Moneda en los Reinos de Indias. Vol. II: Cecas de Fundación Temprana*, 1997.
- ✓ *Presencia Flamenca en la Sudamérica Colonial*, 2001
- ✓ *Culture and Customs of Perú*, 2003. In English, co-authored with Cesar Ferreira.

*NI*

**Ancient Copper Coins of Japan**  
**Motoko Kumano**  
**Institute for Monetary and Economic Studies, Bank of Japan**



**Man'nen Tsuho (760)**  
Diameter: 25-27mm  
Mass: approx. 5g



**Ryuhei Eiho (796)**  
Diameter: 23-28mm  
Mass: approx. 3g



**Jowa Shoho (835)**  
Diameter: 20-23mm  
Mass: approx. 2g



**Nyoyaku Shimpō (859)**  
Diameter: 19-20mm  
Mass: approx. 2g



**Kengen Taiho (958)**  
Diameter: 18-20mm  
Mass: approx. 3g

**Twelve Copper Coins of Ancient Japan**

During the 250 years following the mintage of the Wado Kaichin or Wado Kaiho in AD 708, the government issued twelve types of metallic currencies, which were classified into twelve copper coins, two silver coins and one gold coin. These coins are commonly referred to as ancient Japanese metallic currencies or Kochosen, while the group of copper coins are specifically called the *Twelve Copper Coins of Ancient Japan*.

Fifty-two years after the mintage of the Wado Kaichin or Wado Kaiho, the government carried out its first re-coinage and issued the Man'nen Tsuho in 760. With this re-coinage, the value of one Man'nen Tsuho coin was stipulated as equivalent to ten Wado Kaichin or Wado Kaiho coins. This ratio was established by the government, modeled after the Chinese re-coinage of the Kai Yuan Tong Bao into the Qian Feng Quan Bao.

With each new re-coinage, copper coins became smaller in size and degraded significantly in quality as the shortage of copper supply restricted the mintage. The above pictures are five distinct coins of the Twelve Copper Coins of Ancient Japan. The Ryuhei Eiho, for instance, varied drastically in size and surviving coins are heavily tarnished in color. The Jowa Shoho has decreased in size substantially, most of which having half the weight of one Wado Kaichin or Wado Kaiho coin. As for

the Nyoyaku Shimpō, its contents include only half copper with the remainder composed of lead and other ingredients. The last issue of the Twelve Copper Coins of Ancient Japan, the Kengen Taihō, was debased extensively with some coins consisting of mostly lead.

Subsequently, the value of metallic currencies plunged, where one copper coin could buy two kilograms of rice in the early 8th century, a copper coin was worth no more than 10-20 grams of rice by the middle of the 9th century. The people stopped using the devalued coins as a medium of exchange. To encourage the coins circulation, according to the Nihonkiryaku, a historical literature from the late Heian Period, the government asked 80 Buddhist priests from 15 temples to pray for the use of copper coins for seven consecutive days. However, as the power of the government weakened, the mintage of the twelve copper coins was then suspended.

All images are courtesy of the Currency Museum, Institute for Monetary and Economic Studies, Bank of Japan.

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**Member Notice**  
**Attribution Assistance Requested**



NI Member Bill Mullan writes: Years ago I filed this coin away under Turkey and forgot about it. Now it has come to light again and I wonder what it is.

It is made of brass and is about 21.5 mm in diameter. It looks like the denomination is half of something and was minted in year two of a reign that began in 1144 of an unknown calendar.

Any help from those who can read Arabic? Please send replies to the NI Bulletin editor or to Bill Mullan at P.O. Box 15340, Chevy Chase, MD. 20825, USA.

*NI*

**A Mexico Philip III 8 Reales Forgery**  
**Paul Harris NI #2591**  
**© Paul Harris**



**Figure 1**

Forgeries of the hammered coinage of Spanish Colonial Mexico are uncommon, but can be a problem for those who are unfamiliar with the distinctive features of original coins and modern reproductions. This forgery is a cast reproduction of an authentic silver 8 reales. The source coin was manufactured at the Mexico mint during the reign of Spain's King Philip III (1598-1621). The details of the design on the obverse and reverse correspond to genuine examples from the earliest period prior to 1607, when dates were first introduced on the coins of Spanish Mexico. The obverse displays what is commonly referred to as the Habsburg coat of arms, surmounted by a crown. The mintmark (M with an o above) is visible to the left of the shield as you view the illustration, with the assayer letter F directly below. This forgery displays the uneven surfaces of the genuine coin, which resulted in design details that are clear in some portions but undefined in others. The reverse features a cross with the familiar castles and lions in each quarter.

Hammered coins were presumably manufactured by hammer-striking a planchet between two dies. Each coin produced by this method was slightly different in size, shape, and detail. At the Mexico mint, the skills and resources required for the process prevented quick, easy, and inexpensive replication of it. This method of manufacture was such an effective deterrent that, from the beginning of operations in 1536 until the introduction of screw press coinage in 1732, contemporary counterfeits apparently never threatened the integrity of its hammered coinage.

Nearly five hundred years later, the singular nature of each coin and the distinctive characteristics imparted by the minting process help to account for the rarity of forgeries in the modern numismatic context. Collectors of hammered coinage prize the fact that their coin is unique, with no exact duplicate in any collection outside of their own. Identical examples immediately arouse suspicion. The core values of the numismatic community, knowledge and authenticity, also present serious obstacles for those seeking to deceive and defraud collectors. Members of our community are encouraged to know their coins and what genuine examples look like. Images are readily available for comparison in our literature, and through electronic mediums. For modern forgers and their distributors, these factors make forgeries of the hammered coins of Mexico financially unprofitable.

The average quality of this forgery makes it easily recognizable to advanced numismatists, but beginners and even experienced collectors of other series can be deceived by its attractive and accurate detail, along with the inconsistent surface characteristics of genuine hammered coins of the period. The circumstances surrounding the first appearances of this forgery have led many to believe that it originated in Mexico during the early 1960s. Numerous identical examples of this fake have been noted by specialists shortly after each distribution, making this forgery a persistent nuisance. Despite the fact that this fake has been previously identified in various articles (such as those by Virgil Hancock) and books (including Calbeto's *Compendium VIII Reales*, published in 1970), for more than thirty years it has appeared in various publications, and continues to be offered for sale as genuine in auction catalogs and fixed price offerings of non-specialists. An interesting aspect of this particular forgery is that it is one of the very few for which the authentic source has been examined. The genuine coin was offered in December of 1983 as lot 25 of Richard Long's Mail Auction Sale 39.

This report is offered in order to assist members of the numismatic community in the identification of forgeries of hammered coinage. Subsequent forgery reports in this series reflect my primary area of interest, the sixteenth century silver coinage of the Mexico mint. This discussion is strictly limited to forgeries confirmed by direct examination, and of which multiple examples exist. Detection and identification of forgeries is the result of many sets of eyes and shared experience combining to reach a consensus about any given example. There is no rush to judgment in the process of determining whether a suspected piece is inauthentic. There are numerous ways to evaluate the question and all must be explored so that no genuine coin is unfairly and erroneously condemned. Methods of detection and authentication, of great interest to numismatists, and eagerly sought by forgers, are reserved for separate discussion elsewhere.

I would like to thank Messrs. Clyde Hubbard and Richard Long for their kind assistance during research on this forgery.

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**The First Russian Ruble**  
**Howard Ford NI #LM90**

The first Russian ruble was issued by Peter I in 1704. Peter's rubles were very large and very heavy coins with 28 grams of silver, planned for the purpose of bringing some stability to the chaotic Russian monetary situation which Peter had inherited from his brother Feodor III and their father, Alexei. Peter's rubles were valued at 100 kopecks, thus beginning a successful decimal coinage in Europe ([http://en.wikipedia.org/wiki/Russian\\_ruble](http://en.wikipedia.org/wiki/Russian_ruble)).

*NI*

**The Pasco Mint**  
**Initial Period, 1825 – 1840 and 1836 Eight Reales**  
**Horace Flatt NI #LM136**

Updated and expanded version of my article *The Pasco Mint: The Eight Reales of 1836* published in the August 1985 *NI Bulletin*.

With the close of the war of independence, actions were taken immediately to revive mining activities and to provide the needed coins for circulation. The military conflicts in the Cerro de Pasco had been very destructive to mining. The mines represented a significant financial resource. From the first patriot victory under Arenales at Pasco until the end of the war, the mines and its machinery had suffered damage from one army or another as they sought to possess this resource. Following the battle of 11 December 1820, for example, the patriot forces broke up the machinery that had been so effective in draining the mines and restoring productivity to the area. The pieces of machinery were cast down into the mine shafts or hidden (Dickinson 1934, 186). An early report indicated that the state of affairs at Cerro de Pasco was not as bad as had been believed: a visitor related that the royalists had carried away all of the wrought iron and bars to make horseshoes and spurs, and had done everything possible to destroy the steam engines used to drain the mines. While the engines were supposed to have been ruined irretrievably, an engineer with the initial "L" was able to get back into operation in a very few months the most important of the three steam engines that had been originally installed (Salvin 1829, 226). He was able to keep it in working order until 28 June 1828 when the boiler finally burst.

In an early act which affected the miners of Pasco, Simón Bolívar decreed on 30 March 1825 that the export of gold and silver bullion was prohibited but that the export of stamped gold or silver was permitted (Gaceta del Gobierno, 3 April 1825). While this was done in order to help assure a supply of bullion for the work of the Lima mint, it did legally cut off the miners from the more profitable trade of exporting their bullion, being forced to sell it to the mint or at the exchange banks (*bancos de rescate*) "wherever they existed." The bank would exchange coins for bullion. At this time, no banks actually existed, the one in Lima having closed as a result of the war. One of the natural consequences of this act was to revive the contraband traffic in silver which had been so prevalent in earlier times. As an illustration, *piña* was selling from about 7 pesos 4 reales to 7 pesos 6 reales in Lima in 1826. Ricketts showed in a report of that year that there was about a 9% increase in profit for the English silver importer if the illicit *piña* were purchased and shipped to England rather than the coined silver (British Public Record Office, Foreign Office (P.R.O., F.O.) 61, Ricketts to Canning, 27 December 1826). Using the same figures, it is easy to see that the miners could effectively receive 20% more entering into the contraband traffic than they would receive in coins from the mint in return for their *piña*. In a very real sense, it is a surprise that the mint received any silver at all.

As a part of the government's preparations for the mining area, Manuel Oyarzábal, the son of the Lima assayer Toribio Oyarzábal arrived in Pasco on 31 July 1826 together with all of the tools and equipment necessary to establish an assay office (A.G.N. 145-177). His arrival was noted by Juan Bernardo Valdivieso, at the time the *Visitador de Rentas de Junín* (Inspector of Revenues). Subsequently, Valdivieso

proposed the establishment of a coin press in Pasco to mint *medios* and *reales* which would be used only in exchange for bullion. However, the government rejected his proposal, citing the "difficulties" and costs that would be encountered in the installation of the coin press (A.G.N. 145-185, 25 August 1826). Valdivieso, a few years later, also suggested the establishment of a mint in Arequipa.

Affairs proceeded slowly: Mariano de Rivero was compelled to write in 1828 (Camprubí, 440):

Nothing is more apparent or more fitting with the industry and condition of the country, nor of more advantage to the interests of the State, than the promotion of mining, the unique support and secure resource that is able to be counted upon always. But by what means is this to be obtained, when we do not have capital, machinery, loan banks (*banco de habilitación*) nor exchange banks; when mining is overloaded with taxes; when the exportation of bullion is prohibited; when mine owners are being sued (in court) in order to fulfill the (contracts for) importation of mercury that were acquired by the previous government; and finally, when it does not manage to stimulate nor instruct them in the knowledge indispensable to this branch, in order that their work would improve, their refining would be perfected and a thousand abuses be destroyed that are observed in the mining centers.

Following this, the ineffectual efforts to set up exchange banks continued, but other actions were more effective: on 2 December 1829 the Mining Tribunal and the Territorial Deputations in the mining centers were re-established. Originally established in Peru in 1786, based upon earlier experience in Mexico, the Mining Tribunal enjoyed full authority over the administrative, economic and educational aspects of the industry. Local deputations were elected in the main mining centers. The deputations were to exercise legal powers to resolve all but the most serious criminal cases involving miners (Fisher 1977, 22).

On 15 December 1829 a law nullified the traditional taxes of *cobos* and *diezmos* for silver bullion and of 3% for gold bullion. A decree of 16 August 1830 also authorized the sub-prefects to receive *piña* at a price of 8 pesos per mark (Rivera 405 & 407). The primary objectives of these decrees were to protect the mine owners and to end the clandestine traffic in silver.

However, as noted by José María de Pando, Finance Minister, in the **Memoria de Hacienda de 1830**, the decrees were not effective and the condition of the mining industry was no better than had been noted several years earlier by Rivero. He outlined the factors that in his view contributed to the continuation of the "disorder" affecting the industry: (a) the scarcity of funds that did not permit the establishment of exchange banks; (b) the inadequacy of the two mints (Lima and Cuzco) in relationship to the extent of the territory and the remoteness of the mines (particularly that of Cuzco); and (c) the impossibility of placing strong barriers to the clandestine traffic, taking root by custom and favored by the circumstances, i.e., the many small coastal ports of Peru which facilitated the shipping of silver in secret.

Another attempt was made the following year to resolve the various problems: a law passed on 1 June and promulgated on 17 June 1831 established mints in Trujillo and Arequipa and "in other cities where it was possible." An immediate response from the

Cerro de Pasco was a letter of 5 June proposing the establishment of a mint there (*Mercurio Peruano*, 6 July 1831). This was followed by a formal request from individuals of Pasco and endorsed by the Mining Tribunal in Lima (A.G.N. P.L. 16-404, 9 July 1831). This request argued that the establishment of a mint would aid in the financial recovery of the district which had suffered from the devastations of the war of independence and the loss of revenue from the clandestine trade in bullion.

A new approach to the lack of funds for the exchange banks was adopted. For the first time, there was to be private participation in these banks, with the Executive deciding how many shares the State would buy. The price of 8 reales per mark for *piña* was continued. However, it was calculated that an investment of at least 200,000 pesos would be required, with an additional sum for the employees (Rivera 1959, 407). This much money was not available, and a decree of 14 April 1832 arranged the export of 50,000 marks of *plata piña* from the departments of Arequipa and Trujillo with a duty of one peso per mark. This didn't yield the necessary amount of money and a further decree of September 1833 extended the lifetime of the decree of 14 April and also planned the same duty on bullion from Tarapacá. Nonetheless, the mints were not established at this time.

On 2 January 1832 the Government, citing the lack of private funds, allocated funds for the establishment of an exchange bank in Pasco, but on 14 April, this action was set aside (Camprubí 448). On 20 July the Prefect of Junín (Felipe Santiago Estenós) forwarded to the Minister of Government and Foreign Relations a proposal from the departmental junta (A.G.N. O.L. 214/208). In order to lessen the cost to the government, the junta proposed to finance the establishment of a mint at Pasco by means of a loan to the government of 30,000 pesos. The money for the loan would be raised through assessments on the eighty-three parishes of the Department. The optimism of the *junta* was reflected in the statement "That this loan is able to be guaranteed with the profits that the establishment of the *casa de moneda* (mint) in the most rich and opulent mining district of the Republic." (A.G.N. O.L. 214/209, 6 July 1832).

This proposal was embodied in the following law (Nieto 1853, 4: 220):

The Citizen José Braulio del Campo-redondo, Vice-President of the Senate, in charge of the Executive Power of the Republic...

Whereas the Congress has given the following law.

The Congress of the Peruvian Republic Considering:

- I. That the municipal government of the village of Pasco has asked that the mint corresponding to the department of Junín be established there, offering to produce the building at its expense;
- II. That Pasco is the most suitable place for this establishment;
- III. That it is convinced besides that by this indirect means (establishment of the mint) the hardships of the population removed further from the mines, residing at its entrances and in its extents, will concentrate in the greatest immediate vicinity possible the advantages of the business that will follow to the remaining industrial classes that are not mining;

The following law has been given.



Article 1. The executive will give suitable orders that there will be established in Pasco the mint that corresponds to the department of Junín, permitting the services that the municipal government of the village offers in its representation.

Article 2. The prefect and the territorial deputation of Pasco should propose in accord the funds or taxes that for the time would not burden the national treasury, and will consult on the prompt installation of this establishment.

Article 3. The Executive will formulate opportunely the regulations of the mint: naming provisionally the necessary employees, indicating their wages, and if it is convenient, adding to that mint those of the departmental treasury and of the foundation, proceeding with activity and economy and giving accounts of all to the Congress for its approval.

Communicate to the executive power in order that it will arrange that necessary to its fulfillment, ordering it to imprint, publish, and circulate. Lima, December 19, 1832. Manuel Telleria, President of the Senate - Francisco de P. Gonzalez Vijil, vice-president of the Chamber of Deputies - José Gregorio de la Mata, Secretary of the Senate - José Goyochea, Deputy Secretary - Excellency the President of the Republic.

Therefore, I order that it be imprinted, published and circulated and that it be fulfilled. Given in the house of supreme government in Lima October 30, 1833. 14°-12. José Braulio del Campo-redondo – P.O. of His Excellency .José de Mendiburu.

In the collection of laws from which this was taken, it was noted that the law was not placed in effect. Again, the lack of money forestalled its implementation, for it required that the proposal "would not burden the national treasury."

However, the energetic Francisco Quiros became prefect of Junín. He had previously been a director of the Pasco-Peruvian Company which had sought to exploit the mines there. On 9 July 1834, Quiros wrote to the Minister of Finance concerning a new proposal to establish a mint at Pasco (*Gaceta Mercantil*, 21 July 1834). In his introduction, he noted the lack of capital in the mining district prevented the return of the mines to their former productivity: only ten or twelve mines were in operation, while about five hundred were not being worked. Even for those mines, there was a requirement of 10,000 pesos of capital each week to fund the operations. However, it required two months for the coins which were the ultimate product of the mining activity to be returned to Pasco for re-investment. The transportation to Lima, the time required to mint the coins, and the return trip to Pasco made risky by robbers - all worked to make the cost of funds high. This amounted to a total of about three or four reales per mark of silver. Quiros estimated that the cost of the funds necessary for the operation of the mines would drop to only one real per mark with the establishment of a mint at Pasco which would return the coins in only eight days.

Some of the risks referred to by Quiros had been illustrated the previous month. While it was usually more profitable to attempt robberies of the newly minted coins, four bars coming from the Cerro were stolen only a half league from Lima. This led to the stationing of seven policemen at both Caballero and Yangco on the road to

Lima. Subsequently, it was noted that these particular bars were recovered and forwarded to the mint (*Gaceta Mercantil*, 20 June, 1 & 15 July 1834).

Enclosed with the letter of Quiros was the proposal of the company formed to build and operate the mint. The principal features of the proposal were that the company would build the mint and provide all necessary tools and machinery brought from Europe. The Government was to name the employees and pay their wages as well as all the costs of minting. The investors were to receive 3% of the amount actually minted in repayment. After a term of 10 years, the mint and its equipment were to become the property of the state.

Quiros, Miguel Otero, and Juan Isidro Arguelles were directors of this new company, each holding two shares of the total of sixty available. It is interesting to note that Aquilles Allier held one share (*Gaceta Mercantil*, 22 July 1834). Allier and Quiros were to become partners in a much more profitable operation a few years later as the value of the natural fertilizer *guano* was recognized. Otero had been the third largest miner in Pasco in 1827 (Deustua 1986, 127).

This proposal was brought forward for consideration by the Council of State. It was argued that an additional benefit of the mint would be a lessening of the clandestine traffic in silver which was depriving the Government of sorely needed funds (*Gaceta Mercantil*, 5 January 1835). A more detailed and critical review was contained in an issue of the same journal. The most difficult point was that Government funds were still required for the mint (*Gaceta Mercantil*, 24 January 1835). Quiros and Arguelles, given the power of attorney for the company, submitted the proposal formally to the Council on 26 January, 1835 (*El Telegrafo*, 3 February 1835). After further discussion on 3 February and minor modifications, the proposal was approved (*El Telegrafo*, 10 February 1835). The final version of the proposal was contained in the following decree (Nieto 1853, 5: 34):

The Citizen Felipe Santiago de Salaverry, *benemerito á la patria en grado heroico y eminente*, decorated with the medals of the liberators of Peru, Zepita, Junín, and Ayacucho, general of brigade of the national armies and Supreme Chief of Peru.

Whereas this proceeding with the pronouncement that preceded and considering that the proxy of the enterprise for the installation of the mint in the village of Pasco is plain with the aim to which that pronouncement contracts; and that it is the greatest urgency to proceed to the erection of that establishment, in that the welfare of the State and of commerce is involved;

I decree:

Article 1. There be established a mint in Cerro de Pasco, at the expense of the entrepreneurial society and without cost or burden to the treasury.

Article 2. In compensation of the costs that the society undertakes, the profits that result from the economy and the simplification of the machinery that is employed in the establishment is declared in its favor.

Article 3. In order to regulate these profits, there will be calculated the profits that the mint of this capital has rendered finally in favor of the State, the excess being by reason of economy and simplification of machinery, to the benefit of the enterprise.

Article 4. The entrepreneurs will be owed the profits for the term of ten years; but if the State wishes before to buy the machinery and other coining tools, crediting its just cost, able to be made through appraisal of the intrinsic values that it has then.

Article 5. If the State finds it convenient to take the establishment before ten years, it will be indispensable that the *empresarios* with the profits referred be covered for the interest of the capital that has been spent, calculating at the rate of 1 1/2% monthly. If the profit exceeds the interest indicated, the excess will remain in favor of the enterprise.

Article 6. If the ten years expire and the State has not purchased, or it has not been convenient to take the establishment, it will be possible to sign a new contract, in accordance to the good it has for the government.

Article 7. It is not possible to commence the minting until the *prefect* of the department informs with regard to the solidity and convenience of the mint, as much for its works, as for the safety of the property that is entered there.

Article 8. The government will expedite opportunely the internal regulations to which the mint ought to be subjected, naming the employees that are necessary for the service, and designating the wages that have to made use of.

The principal official in charge of the ministry of hacienda will take charge of the fulfillment of this decree. Given in the house of government in Lima February 21, 1835.

- Felipe Santiago de Salaverry - P.O. de S.E. - José de Mendiburu.

We see that the principal change was to remove the 3% fee for the entrepreneurs and to place the burden of making a profit upon the efficient operation of the new mint as compared to the older Lima mint. This change was to prove disastrous in later years when the mint actually went into operation. Again, it is noted in the collection of laws that this law was not fulfilled. However, the reasons this time may have been more complicated. We note that the approval of the Council was given almost simultaneously with the beginning of the revolution of Salaverry against General Luis José de Orbegoso, the constitutional President. The revolution quickly spread throughout the country and Quiros, a supporter of Orbegoso, quickly became a target of the revolution - a matter which undoubtedly detracted from his interest in the new mint. A measure of political stability did not return until the defeat of Salaverry by Santa Cruz at the battle of Socabaya on 7 February 1836.

Two coin presses (and perhaps other tools and instruments) had been ordered during 1834 (Flatt, 58 and A.G.N. PL 16-345, 2 November 1836). While waiting for this machinery, work proceeded using local artisans for the construction of machinery and tools, including a complete coin press, as well as machines to roll the strips to the proper thickness, to cut the planchets, and to impress the edges (Luque 1991, 87). According to a letter of 30 December 1835, this equipment was used to "fabricate some coins of so good fineness and weight, that no differences could be discerned with the dies of Lima" (A.G.N. P.L. 16-431).

In this letter, and others, prompt approval for the operation of the mint was requested. Not only was the ability to stamp coins cited, but other urgent needs for money were

described, such as coins for the bullion exchange (coins had not been received from Lima for about three months because of the civil war between backers of Orbegoso and Salaverry) and coins to pay soldiers. In reply, the government of Orbegoso commissioned the Commanding General of Tarma, Trinidad Moran, to sign a contract with the *Compañía Empresaria de la Casa de la Moneda de Pasco*, the organization established to operate the mint. Moran and Miguel Otero signed the agreement on 3 January 1836 (A.G.N. P.L. 16-431, 3 January 1836), which differed from the decree of Salaverry only in the fifth article. The new contract specified that any excess profit would go to the government.

On the same day, Francisco Quiros was appointed as Director of the new mint, with an annual salary of 3000 pesos (A.G.N. P.L. 16-345, 2 November 1836). Subsequently, other officials were named, including José Allende as Contador, Andrés Figueroa as treasurer, Manuel Oyarzábal, assayer and weigh-master, and Eugenio Robolo, *fiel* and foundryman. José Robolo was the engraver (Luque 1991, 84).

Quiros apparently continued his work as Director for about four months, and then sought leave in Lima in order to recover from the "rigid climate" of Pasco. The lack of news concerning the shipment of the machinery from France suggested the loss at sea of the ship bearing the machinery. At the same time, it was clear that the machinery already built for the mint could not sustain a profitable level of operation. The coins minted earlier had apparently been submitted for examination in Lima by the **Junta de Inspección de Monedas**, who did not approve of the quality of the coins (Luque 1991, 85).

In the meantime, opposition to the opening of the mint developed. In a series of articles on the affairs of the Hacienda, the newspaper *El Telegrafo de Lima* made clear its objections to the installation of the mints at Pasco and Trujillo, stating that in its opinion, it would not be "profitable to the state, nor advantageous to the mining industry" (18 May 1836). The reasons given were in many ways prophetic. In addition to the obvious increase in costs associated with the operation of the three mints (in North Peru), it was pointed out that it would be difficult to mint in Pasco and Trujillo coins as uniform and perfect as those that could be made at the Lima mint. The experience, good machinery, and the power necessary for this heavy work were overwhelming advantages of the Lima mint. Concern was further expressed that "whatever small difference that was noticed in the type or fineness of the coins, would alter their value in the marketplace; something that is necessary to avoid."

It was further suggested that these new mints would lack the funds necessary to immediately pay the miners for their bullion. It was noted that this was particularly true for the mines of Hualayoc, situated about 240 miles from Trujillo (of course, the same problem existed for the miners of Pasco relative to the Lima mint). As an alternative solution to the problem, the establishment of national banks in the vicinity of the mines was advocated. These banks would have the responsibility of buying the bullion at the highest price possible, paying the miners immediately.

The banks were not established; the mint at Trujillo was never established, and in September 1836 the Prefect of Junín, Francisco Paula Otero, declared that he was not able to begin minting with the existing equipment. It was then ordered by the Finance Minister that the machinery and tools be deposited in the treasury of the department in order to avoid their illegal use (Luque 1991, 87).

Archibald Smith, an English physician who lived in Peru, wrote a book on his experiences while there. He noted (Smith 1839, 2:20) that:

The risk, expense, and delay usually occasioned, and more particularly in days of civil broil, by the necessity of forwarding the bars of silver from Pasco to Lima for the purpose of coinage, are felt as so many real grievances by the miner; and it is known that these causes, with the desire to avoid the payment of the established duties, have led to a contraband trade across the byways of the mountains to the coast, which no number of custom-house officers could prevent, even on the extravagant supposition of their being proof against bribery and corruption. The evils attendant on the existing arrangements led the legislature to pass a law for the establishment of a mint at the mines of Pasco; but this desirable object has not yet been carried into effect in a proper and efficient manner, though we understood that the *prefect* Quiros employed a native tradesman to erect some rude machinery by which a few hundred dollars were thrown off daily.

Obviously, the assertion of the last sentence is of major interest to the numismatist, even though it does not contradict the statement that the laws of 1832 and 1835 had not been fulfilled by the establishment of a mint. So far, it has not been possible to place a date on this assertion, although the reference to Quiros is consistent with the dates of interest.



**Figure 1**  
**Pasco Eight Reales of 1836 (Riddell 1845, No. 97)**

A coin with a Pasco mintmark dated in this period is known: the eight reales of 1836. An almost contemporary illustration of the coin was published in 1845 (Riddell 1845, No. 97). The illustration was made using a metal type prepared using the coin itself; the fineness was given as 0.9 and the weight as 27.05 grams. It is seen that the mintmark used was **PASCO** and the assayer's initials were **M.O.** The figure of the maiden is distinctly reminiscent of that used on the gold coins of the day rather than the silver coins of Lima or Cuzco. It is not known if this particular coin has survived; currently the only known example of an eight reales of 1836 with a Pasco mintmark was in the collection of Dr. Ernesto Sellschopp of Dortmund, West Germany, and has subsequently been sold. It is holed and quite worn. Diez-Canseco conjectured that the coin was a proof coin, possibly made in Lima (Diez-Canseco 1978, 12). It would certainly be consistent with the procedures designated for the mint at Trujillo for the dies to have been made in Lima. However, the document cited above, as well as the observation of Smith, strongly indicates that the coin was struck in Pasco.



Renaissance Auctions

**Figure 2**  
**Pasco Eight Reales of 1836 (Von Schuckman Collection)**

While more research is needed, some additional information has been obtained from an early issue of *El Eco del Protectorado*, a newspaper published in Lima beginning in 1836. The issue of 22 October 1836, contains a copy of the monthly statement of the receipts and expenses of the Treasury of the Department of Junín for September 1836. As a part of that statement, among the extraordinary expenses of the Treasury is listed a payment of 5 pesos 2 reales "for the ex-sub-prefect D. Jorje Duran to D. Eujenio Revolo, for the amount of 6 ounces of silver that was invested in the minting of 6 *pesos fuertes* on the machine that was constructed for this mining area."

This item clearly confirms that part of Smith's account relative to the construction of a coin press in Junín; Revolo (Rebolo) was the *fiel* for the mint. It is probable (but not certain) that the coins mentioned were the Pasco eight reales of 1836. The assayer's initials **M.O.** correspond to Manuel Andrés Oyrázabal.

A comparison of Figures 1 and 2 show that these are entirely different examples of the Pasco eight reales. In a private communication, Von Schuckman indicated that the specific gravity of his example of the Pasco eight reales was 9.665, indicating a fineness of about 0.56. Note the variance in the fineness of the coin as reported by Riddell and this coin. It is difficult to understand why, with so few coins made (according to the above report), there should be so great a difference.

Some questions remain. Where was the press or mint actually located? The payment was listed as going to Duran, the sub-prefect not of Pasco, but of Huánuco. Where were the dies prepared? As suggested by Diez-Canseco, they were probably prepared in Lima, but, again, this has not been confirmed. One final comment, Smith says that "a few hundred dollars were thrown off daily." If they were, there is little reason to believe that they carried the Pasco mintmark: more than one example probably would have survived if that were the case. The possible location of the machine in Huánuco suggests an entirely different explanation of his account: during the period of the Peru-Bolivian Confederation, the area around Huánuco became notorious for the striking of counterfeit coins (*La Libertad Restaurada*, 25 July 1840). The press commissioned by Quiros may have become at least the prototype of the machines of a cottage industry of Junín.

But there is still another significant question: Is the coin from the Von Schuckman Collection a counterfeit? We know that die varieties of Peruvian coins of this period

are very common, so the fact that the two examples of the Pasco coin differ in design details causes no concern. But we also know that the fineness of the legitimate coins varies by only a few grains up or down from the legal requirement of 10 dineros 20 grains. A coin differing greatly from the standard fineness is immediately suspect. After all, the fineness of this particular coin is even less than that of the debased four reales coins of Cuzco which circulated in Peru in this period. It also emanated from a region notorious for counterfeiting, as noted above.

The coin from the Von Shuckman Collection is worn and almost certainly circulated. But in a country almost always short of coins, counterfeit and debased coins circulated freely. However, the actual silver content of such coins usually determined their value in the marketplace.

For all of these reasons, the author believes that it would be extremely difficult to prove that the coin from the Von Schuckman Collection is not a counterfeit. Of course, this does not mean that the coin is not a valuable coin worthy of interest. It does mean as of today there is no known Pasco eight reales coin which is unquestionably legitimate.

Editor's note: The Von Schuckman specimen was cataloged in *Renaissance Auctions* auction of 6 December 2000 as lot 955.

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## **A Treatise on the Alteration of Money (1609)**

**Juan de Mariana, S.J.**

**Translation by Patrick T. Brannan, S.J.**

**Introduction by Alejandro A. Chafuen**

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### ***Introduction (pp 531-2)***

Our present volume, Mariana's treatise on currency debasement, gives the reader a glimpse of Mariana's knowledge of history and political science, tackling the topic with an economic profundity that I have not been able to find in any other previous work on political economy.

Given contemporary specialization in the academy, many readers might at first be puzzled as to why a moral theologian would write a treatise on money. The Scholastic thinkers were, however, men of wide and deep knowledge. For most of them, moral analysis was their primary concern. Yet, as good moral theologians, they understood that performing proper moral analysis requires a practical understanding of the matter at hand. If one wants to understand just prices and fairness in market exchanges, one first has to understand price theory and how a market operates. In Mariana's case, the issue before him was monetary policy and its effects on the common good of the kingdom. He wrote this treatise to offer his insights to the king, advising him on how to protect the economic well-being of the land. As such, it is not only a moral examination of monetary policy but also a brilliant economic treatise...—Alejandro A. Chafuen

### ***Preface (p 533)***

May the immortal God and all his saints grant that my labors may benefit the public, as I have always prayed. The only reward that I seek and wish is that our king, his advisers, and other royal ministers entrusted with the administration of affairs, may carefully read this pamphlet. Here I have clearly, if not elegantly, attempted to illustrate certain excesses and abuses, which, I think, must be strenuously avoided. The point at issue is that copper money, as minted in the province today, is of inferior quality to earlier coins. Indeed, this practice inspired me to begin and complete this slight, but not insignificant, endeavor without consideration of men's judgment. Doubtless, some will indict me for boldness and others for rash confidence. But, reckless of danger, I do not hesitate to condemn and revile things that men of greater prudence and experience considered a cure for ills.

### ***Argument (p 535)***

At the time that there was a great shortage of money in Spain and the treasury was completely exhausted by long and drawn-out wars in many places and by many other problems, many ways to make up for this shortage were thought out and tried. Among others, consideration was given to the debasing of money, and that in two ways: First, by doubling the value of existing money, the king gained a good deal: half of the entire sum, which was huge—a great profit in the situation! Second, new money was minted from pure copper with no addition of silver, as was customary. Rather, their weight was diminished by half. In this way, the king profited by more than two-thirds.



***Chapter 3: Can the King Debase Money by Changing Its Weight or Quality Without Consulting the People? (p 544)***

But the question is this: Can a prince in every case solve his fiscal problems on his own authority and debase his kingdom's money by diminishing its weight or its quality? Certainly the common opinion of legal experts agrees with that of Hostiensius, expressed in his *De Censibus*. Among these experts are Panormitanus and Innocent III who, in the fourth chapter of *De Iureiurando*, maintains that a prince may not do this without the consent of his subjects. One concludes, therefore, that if the king is the director—not the master—of the private possessions of his subjects, he will not be able to take away arbitrarily any part of their possessions for this or any other reason or any ploy. Such seizure occurs whenever money is debased: For what is declared to be more is worth less. But if a prince is not empowered to levy taxes on unwilling subjects and cannot set up monopolies for merchandise, he is not empowered to make fresh profit from debased money. These strategies aim at the same thing: cleaning out the pockets of the people and piling up money in the provincial treasury. Do not be taken in by the smoke and mirrors by which metal is given a greater value than it has by nature and in common opinion.

***Chapter 4: The Twofold Value of Money (pp 547-50)***

As our own laws tell us, our countrymen clearly decided that the two values be kept equal. Indeed, gold and silver are clear instances of this equality. Sixty-seven silver coins are made from eight ounces of silver, called a mark, while the same weight of natural silver is exchanged for sixty-five silver coins, both in accordance with the prescripts of law. Thus, only two silver coins are added for the work involved in minting. Each silver coin is equivalent to thirty-four maravedis, while the same weight of natural silver is valued at about thirty-three maravedis. What about gold? Sixty-eight gold coins, called coronas,<sup>1</sup> are struck from eight ounces of gold. Natural gold is worth about the same amount. Copper money is valued in the same way, but in this case it seems more difficult to reconcile the legal value with the natural value. According to the law promulgated in Medina de Campo in 1497, the Catholic kings<sup>2</sup> ordained that eight ounces of copper, mixed with seven grains of silver (about the weight of one and one-half silver coins), would make ninety-six maravedis. The silver was worth more than fifty-one maravedis. The eight ounces of copper and the cost of labor approximate the other forty-four maravedis in value. In this way, the legal value is easily reconciled with the value of the metal and the labor.

Then in 1566, Philip II, king of Spain, abrogated the previous law and established that four grains of silver—the weight of one silver coin—were to be mixed with eight ounces of copper. From this mixture, one hundred ten maravedis were to be minted. In so doing, he took away more than half of the silver from the quality of the metal, and added fourteen maravedis to the old value. He was, I think, considering the expense of minting, which, doubtless had doubled with time, as well as made a profit from his supervision. Led on by this modest and slender hope, many men—after they had been authorized by the king to produce this money—made an immense profit. Consequently, as in past years, this business was considered especially lucrative. Yet,

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<sup>1</sup> An old Spanish coin.

<sup>2</sup> Ferdinand of Aragon and Isabella of Castile.

the two values of money were not un-reconciled in this approach, because the value of silver was mixed in with the eight ounces of copper, and one must include both the price of copper and of production, both of which were valued at least two other silver coins. Moreover, debased money, which we call blancas, valued at half a maravedi, was being frequently minted and was a source of much greater vexation and nuisance.

At this time, no silver was mixed with copper in copper money, and eight ounces of copper yielded two hundred eighty maravedis. The entire cost for stamping did not exceed a silver coin. Copper was selling at forty-six maravedis. The cost of stamping and value of the metal thus came to eighty maravedis. The profit was therefore two hundred maravedis on each mark, because the legal value of this money exceeded the intrinsic and natural value of the metal.

### ***Chapter 12: Concerning Gold Money (pp 583-6)***

Gold money varies greatly. I am not talking about the still extant money of the first Roman Emperors—gold coins minted from the most pure gold with their names inscribed on them. On the other hand, when the Goths were in control in Spain, impure and base gold was coined—gold of twelve or thirteen karats—because of many additions. Nonetheless, some of their kings' coins of better gold have been discovered. We have, moreover, seen one coin that was twenty two karats. We need not go into the monetary arrangements of the kings of Leon and Castile when Spain was coming into power: We do not happen to see gold from that period, and it would be very laborious to delay on it.

I will deal with only those changes that were made in gold from the time of King Ferdinand and Queen Isabella. At the beginning of their reign, these rulers minted coins from very pure gold of twenty-three-and-three-fourths karats, which they called castellanos: fifty from eight ounces of gold, with each coin worth four hundred eighty-five maravedis. Thus, the eight ounces, once minted, were worth twenty-four thousand, two hundred fifty maravedis. But as bullion of the same quality, the mark was worth only two hundred fifty maravedis less. This difference, after the gold was minted, used to be divided equally among the officers of the mint and owner of the gold. At the same time, eight ounces of twenty-two-karat gold bullion was worth twenty-two thousand maravedis, and the bullion weight of a castellano was worth four hundred forty maravedis, because gold of that sort was not being minted at that time. Only goldsmiths employed it in their craft. Neighboring nations used gold minted in accordance with our quality and price. This fact created no difficulties.

Then, a little while later, to the glory and prosperity of our nation, the western passage to the Indies was opened and a large amount of gold was imported every year. In their desire for our gold, some of our neighbors debased the quality of their own, and others increased the price of ours. Conscious of these ploys, our people did not debase the quality of their gold at that time; they just increased its price. Therefore, in the 1497 Parliament of Medina the same rulers decreed by law that no more castellanos were to be minted but, in their place, ducats<sup>3</sup> were to be minted, which they called excellentes. From the previous eight ounces of gold of the same purity, sixty-five-and-one-third such coins were to be minted, each valued at three

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<sup>3</sup> Spanish text reads *Dineros*—Trs.

hundred seventy-five maravedis. And so, minted gold advanced to twenty-four thousand, five hundred maravedis; gold bullion or jewelry of the same weight was worth twenty-four thousand, two hundred fifty maravedis. At the same time, eight ounces or a mark of twenty-two karat gold was worth twenty-two thousand, five hundred maravedis, and the value of a castellano was four hundred fifty maravedis. This rate continued for several years until it was noticed that the neighbors were further debasing gold.

Thus, in the 1537 Parliament of Valladolid, Charles Augustus changed things completely and decreed by law that gold of precisely twenty-two karats was to be minted. Sixty-eight coins were to be minted from eight ounces, and, called coronas, each was worth three hundred fifty maravedis. As a result, eight ounces of this money were worth twenty-two thousand, eight hundred maravedis. There was no legislation concerning gold bullion or gold, either coined or as jewelry. It was bought and sold by agreement like merchandise. The Nueva Recopilacion (bk. 5, pt. 1, law 4, title 24) decrees that goldsmiths were to work no other gold but the purest, or twenty-two karat, or at least twenty karat. Therefore, unlike silver, gold bullion did not always parallel minted gold and was not governed by the law for minted gold. Nonetheless, for the most part, twenty-two karat gold was minted and was common with goldsmiths.

Because of its lower price in Castile, foreigners kept exporting gold, which had been exchanged for crafts and goods. This fact compelled Philip II, king of Spain, to increase the price of gold in each corona by fifty maravedis in the parliament of Madrid. Consequently, what used to be valued at three hundred fifty maravedis went up to four hundred maravedis. With this law, eight ounces of minted gold reached twenty-seven thousand, two hundred maravedis. The castellano was worth sixteen silver coins or reales.

At this point, we may consider the possibility of debasing gold coins. Just as the quality of copper coins was diminished, and just as they are thinking about doing the same with silver coins—as rumor has it—would the State benefit if the same thing were done with gold coins? They would have less quality and be increased in value. The issue is the same. I personally believe that every alteration in money is very dangerous. It is never expedient to mint unlawful money and thus increase by law the cost of something that is commonly considered to be worth less. Nor can our neighbors be prevented from further debasing their money because of our example. We have learned by experience from the four changes made in gold since the time of the rulers, Ferdinand and Isabella, that it is impossible to prevent the gold from being carried off. But if gold coins are greatly debased, perhaps foreigners would scorn it. Certainly, it would lose much of its value. I doubt that such a situation would befit the majesty of Spain. In my opinion, however, it would not cause serious harm if gold were altered by taking away part of its quality and increasing its price. This is especially true because such a change in the past, when repeated frequently within a few years, did not bring serious disadvantages. The supply of gold is always small in comparison to silver, and its use as money is less common and usual. And so, I have not been accustomed to believe that it would be very disadvantageous if an alteration were to occur.

In any event, I have always been convinced that I would wish things to hold to their course and not be concerned with money. Nor does the opposite approach benefit in any way, except to provide income for the prince. And income should not always be our goal, especially by this means, that is, debasing money. As a matter of fact, provided that the original quality and reckoning of copper and silver money remain intact, I would not be too concerned about what happens to gold in either way. Two things are important: One, that it be done with the consent of the subjects concerned; the other, that the money always be legitimate or legal, and not otherwise. To achieve this end for copper money, both values must be equal: The value of the metal, whether mixed with silver or not, must be computed, as well as the cost of minting. Thus, if eight ounces, or a mark, of copper along with the expenses of minting cost only eighty maravedis, it is unreasonable to permit its value to be increased by law to two hundred eighty maravedis, as is now done. It is unlawful to do so to the degree that legal value deviates from real value.

To preserve parity in the case of gold and silver, their proportional relationship must be considered. If they are of equal purity, gold is compared to silver by a ratio of twelve to one, as Budeus says in *De Asse* (bk. 3). I say of each, “purity or quality,” because just as the purity of gold is commonly divided into twenty-four grades, which the goldsmiths call “karats,” so the purity of silver is divided into twelve dineros.<sup>4</sup> Thus, silver of eleven dineros ably corresponds to twenty-two-karat gold. And this proportion generally holds between these two metals. Of course, the ratio would change because of the scarcity or plenitude of one or the other metal. They are like other goods: An ample supply lowers the price, and scarcity raises it. As a result, we should not be surprised that the ancient authors do not agree on how gold and silver were related to one another in value.

Therefore, gold and silver money of the same purity and weight should be carefully exchanged at the rate of twelve silver coins for a gold coin, as now happens. For that is lawful. If that value is exceeded or lessened, the whole transaction smacks of fraud. For example, if a gold corona is exchanged for sixteen or eighteen silver ones (reales), this transaction is a clear-cut violation of monetary justice, unless, of course, the purity of the gold is increased or the purity of the silver lessened. When such is the case, what seemed to be unjust is lawful and in keeping with equity. Finally, it is of the utmost importance that princes do not profit from debased money. Were that permitted, it would be impossible to curb the greed of foreigners and countrymen who, in the hope of great profit, would force upon us counterfeit and adulterated money of the same kind.

The entire translation of *A Treatise on the Alteration of Money* is on the website of Acton Institute for the Study of Religion and Liberty, <http://www.acton.org/>. The URL of the treatise is [http://www.acton.org/publicat/m\\_and\\_m/2002\\_fall/mariana/](http://www.acton.org/publicat/m_and_m/2002_fall/mariana/).

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<sup>4</sup> *Dinero* = the standard for silver = twenty-four grains—Trs.